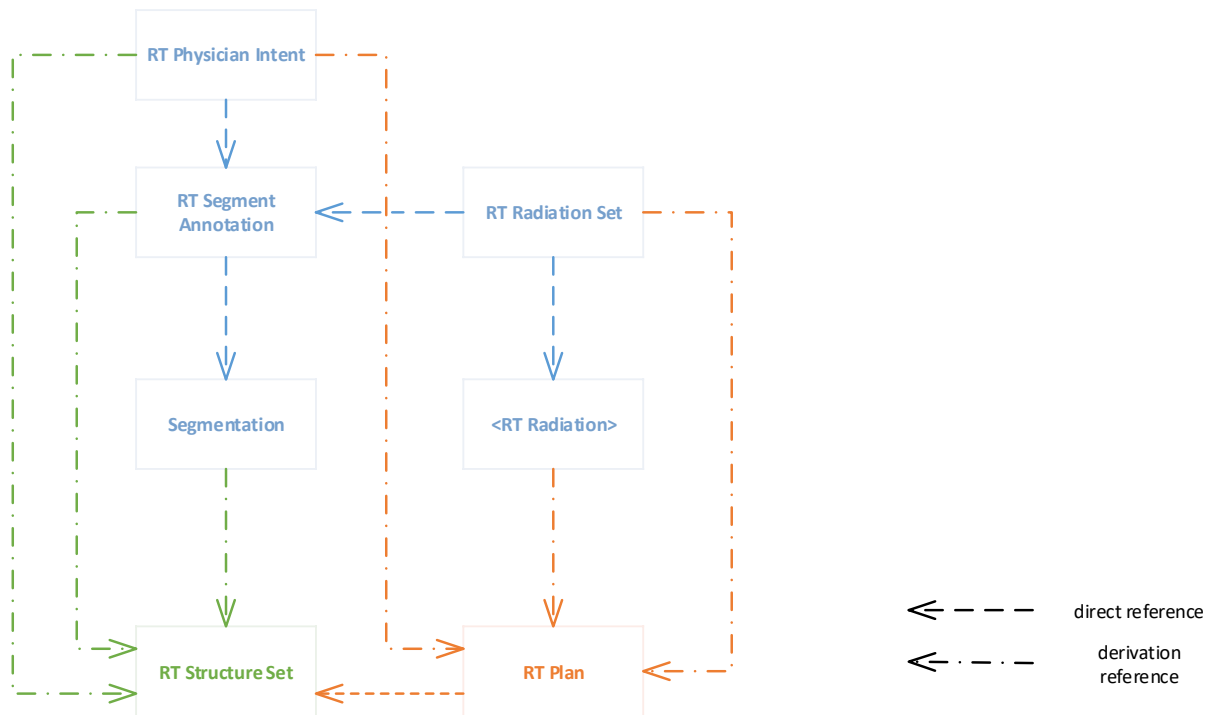


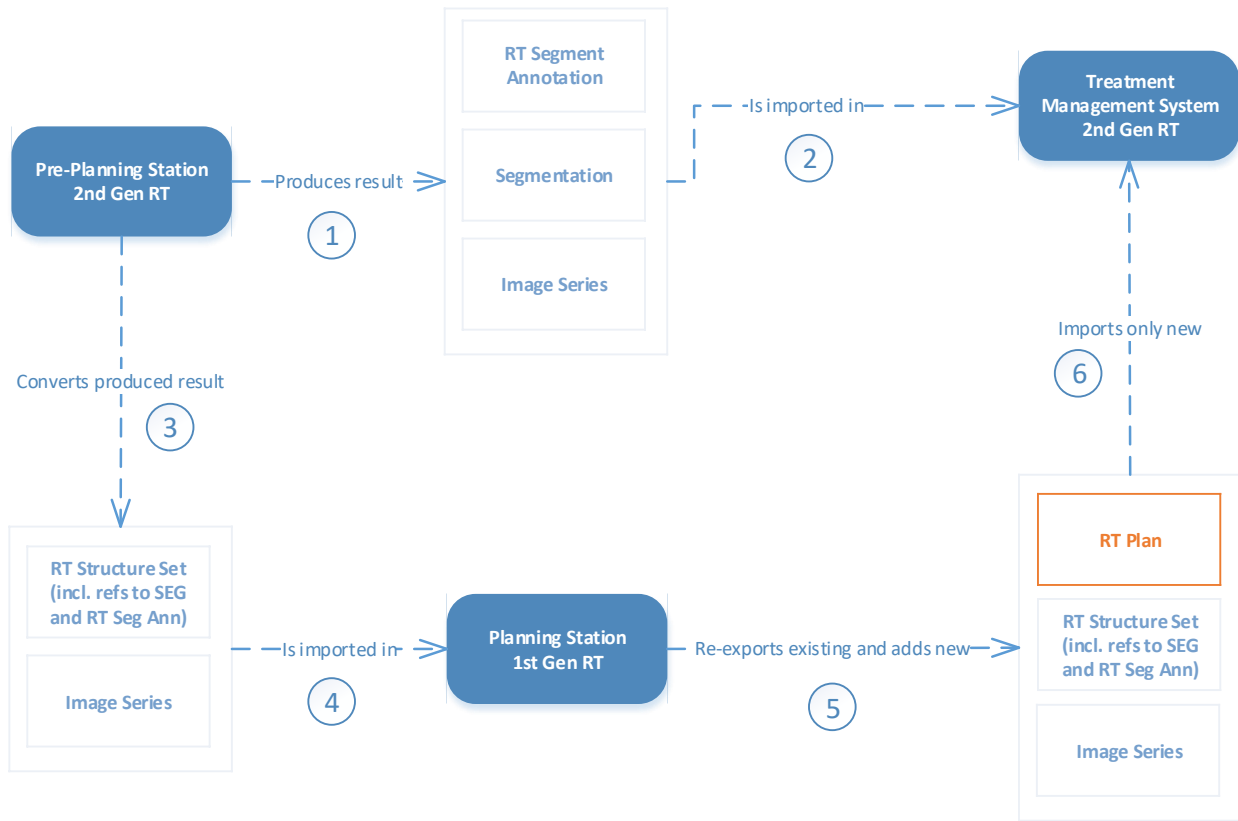
DICOM Correction Proposal

STATUS	Assigned
Date of Last Update	2017/09/08
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Correction Number	CP-1617
Log Summary: Constituent Mapping Macro	
Name of Standard PS 3.3 2017c PS 3.6 2017c	
Rationale for Correction: It is proposed to add a facility that allows referencing source information even below instance level to reference constituents of an instance. A use case for this additional feature would be to annotate which ROI in an RT Structure Set was derived from which Segment in a Segmentation instance by using the Selector Attribute mechanism (see at the end of the CP for an addition to Part 17). The current CP extends existing IODs where encoding of the same information in different SOP Instances is possible. It is foreseen that this will be continued, once the 2 nd Generation DICOM RT SOP Classes are available within the Standard. Examples are illustrated in the following drawings:	



Conversion of 2nd Generation DICOM RT to 1st Generation DICOM RT Instances



Conversion workflow in mixed 1st/2nd Generation DICOM RT environment

Correction Wording:

Add to Part 3 Annex C – Section C.8.8.5 Structure Set Module:

C.8.8.5 Structure Set Module

A structure set defines a set of areas of significance. Each area can be associated with a Frame of Reference and zero or more images. Information that can be transferred with each region of interest (ROI) includes geometrical and display parameters, and generation technique.

Table C.8-41. Structure Set Module Attributes

Attribute Name	Tag	Type	Attribute Description
Structure Set Label	(3006,0002)	1	User-defined label for Structure Set.
...			
Structure Set ROI Sequence	(3006,0020)	1	ROIs for current Structure Set. One or more Items shall be included in this Sequence.

Attribute Name	Tag	Type	Attribute Description
>ROI Number	(3006,0022)	1	Identification number of the ROI. The value of ROI Number (3006,0022) shall be unique within the Structure Set in which it is created.
>Source Instance Sequence	(0042,0013)	3	<u>Instances containing the source of the ROI contour information.</u> <u>Only a single Item shall be included in this Sequence.</u>
>> Include Table 10-11 "SOP Instance Reference Macro Attributes"			
>>Referenced Segment Number	(0062,000B)	1C	<u>Segment identifying the source of the ROI contour information.</u> <u>Required as described in C.8.8.5.2.</u>
>>Referenced Fiducial UID	(xxxx,yy01)	1C	<u>Fiducial identifying the source of the ROI contour information.</u> <u>Required as described in C.8.8.5.2.</u>
...			

...

C.8.8.5.2 Source Instance Sequence

The SOP Classes in Table C.8-41N shall be referenced as shown.

SOP Classes not in Table C.8-41N shall not be referenced.

**Table C.8-41N
Permitted SOP Classes**

SOP Class Name	SOP Class UID	Referenced Attribute	Required Referencing Attribute
Segmentation Storage	1.2.840.10008.5.1.4. 1.1.66.4	Segment Number (0062,0004)	Referenced Segment Number (0062,000B)
Spatial Fiducials Storage	1.2.840.10008.5.1.4. 1.1.66.2	Fiducials UID (0070,031A)	Referenced Fiducial UID (xxxx,yy01)

Add to Part 3 Annex C – Section C.8.20.4.1 Segment Description Macro:

C.8.20.4.1 Segment Description Macro

Table C.8.20-4 specifies the attributes of the Segment Description Macro.

Table C.8.20-4. Segment Description Macro Attributes

Attribute Name	Tag	Type	Attribute Description
Segment Number	(0062,0004)	1	Identification number of the segment. The value of Segment Number (0062,0004) shall be unique

Attribute Name	Tag	Type	Attribute Description
			within the Segmentation instance in which it is created. See Section C.8.20.2.4.
<u>Source Instance Sequence</u>	<u>(0042,0013)</u>	3	<u>Instances containing the source of the ROI contour information.</u> <u>Only a single Item shall be included in this Sequence.</u>
<u>>Include Table 10-11 “SOP Instance Reference Macro Attributes”</u>			
<u>>Referenced ROI Number</u>	<u>(3006,0084)</u>	1C	<u>ROI identifying the origin of the Segment.</u> <u>Required as described in C.8.20.4.1.1.</u>
Segment Label	(0062,0005)	1	User-defined label identifying this segment. This may be the same as Code Meaning (0008,0104) of Segmented Property Type Code Sequence (0062,000F).
Segment Description	(0062,0006)	3	User-defined description for this segment.
...			

...

C.8.20.4.1.1 Source Instance Sequence

The SOP Classes in Table C.8.20-N shall be referenced as shown.

SOP Classes not in Table C.8.20-N shall not be referenced.

**Table C.8.20-N
Permitted SOP Classes**

SOP Class Name	SOP Class UID	Referenced Attribute	Required Referencing Attribute
RT Structure Set	1.2.840.10008.5.1.4. 1.1.481.3	ROI Number (3006,0022)	Referenced ROI Number (3006,0084)

Add to Part 3 Annex C – Section C.21.2 Spatial Fiducials Module:

C.21.2 Spatial Fiducials Module

Table C.21.2-1 defines the general Attributes of the Registration.

Table C.21.2-1. Spatial Fiducials Module Attributes

Attribute Name	Tag	Type	Attribute Description
Content Date	(0008,0023)	1	The date the content creation started.
...			

Attribute Name	Tag	Type	Attribute Description
Fiducial Set Sequence	(0070,031C)	1	A sequence of items, each of which is a fiducial set. One or more Items shall be included in this Sequence.
...			
>Fiducial Sequence	(0070,031E)	1	A sequence that specifies fiducials, one item per fiducial. One or more Items shall be included in this Sequence.
...			
>>Fiducial UID	(0070,031A)	3	Globally unique identifier for the fiducial instance of this fiducial assignment.
>>>Source Instance Sequence	(0042,0013)	3	<u>Instances containing the source of the ROI contour information.</u> <u>Only a single Item shall be included in this Sequence.</u>
<u>>>>Include Table 10-11 "SOP Instance Reference Macro Attributes"</u>			
>>>Referenced ROI Number	(3006,0084)	1C	<u>ROI identifying the origin of the Segment.</u> <u>Required as described in C.21.2.1.4.</u>
...			

...

C.21.2.1.4 Source Instance Sequence

The SOP Classes in Table C.21.2-2 shall be referenced as shown.

SOP Classes not in Table C.21.2-2 shall not be referenced.

**Table C.21.2-2
Permitted SOP Classes**

SOP Class Name	SOP Class UID	Referenced Attribute	Required Referencing Attribute
RT Structure Set	1.2.840.10008.5.1.4. 1.1.481.3	ROI Number (3006,0022)	Referenced ROI Number (3006,0084)

Add to PS 6, chapter 6 Registry of Data Elements

(xxxx,yy01)	<u>Referenced Fiducial UID</u>	<u>ReferencedFiducialUID</u>	<u>UI</u>	<u>1</u>